



BEECHER THE UNITED STATES PATENTS AND TRADEMARKS OFFICE

Inventors: Kevin C. Black and Joe Meating
Serial No: 10/783,033
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Title: **APPARATUS FOR DISPENSING FLUID**
Confirm. No.: 3789
Art Unit: 3643
Our File: BIOFO-03.US 5338-03-10

August 13, 2004

The Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Preliminary Amendment

In the Disclosure

Please amend paras 36, 38 and 44 as shown in Schedule A hereto.

Remarks

These amendments have been made to place the disclosure in a form to correspond to the formal drawings submitted with the Missing Parts as requested by the Patent Office.

None of these changes add new matter. All of these changes are inferable from the Specification as originally filed. The applicant asks that such changes be accepted and entered as tendered.

Respectfully submitted,

per

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Schedule A

Amendments to Disclosure

to Preliminary Amendment of August 13, 2004 Serial No. 10/783,033

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0036] In Figure 1, a worker 300 is in the process of installing a series of canisters 1 and injection nozzles 50 into a number of trees 320. This is done by drilling holes in the [trees 320] trunks 310, inserting an injection nozzle 50 into each hole and mating a canister 1 to each of the injection nozzles 50.

[0038] The state of the canister 1 depicted in Figure 1A with the springs 6, 7, 8 and 9 compressed is the state where the canister 1 is filled with fluid (not shown). The fluid occupies the variable volume 20 delimited by the top surface 21 of the moveable partition 12, the bottom surface 22 of the top end 23 of the cylinder 3 and the inside surface 24 of the cylinder 3. Surfaces [22] 21 and 23 are profiled so as to minimize a volume of undispensed fluid present when the variable volume is fully dispensed.

[0044] The injection nozzle 50 further includes a bore 60 extending therethrough wherein a needle 61 having a bore 62 extending therethrough is provided. The recess 52 is shaped for mating to the canister 1 output port 25 by aligning the injection nozzle bottom end 51 with the output port 25 of the canister 1 and then pushing and/or twisting the canister 1 towards the injection nozzle 50. The recess wall 53 then penetrates into an annular opening 41 of the canister top end 23 (shown in [Fig.1] Figs. 1A, 1B). Upon mating of the injection nozzle 50 to the canister 1, the tip of the needle 61 protruding from the recess top end 55 penetrates the self-sealing valve/closure 26 and accesses the variable volume 20 of the canister 1.